Instructor: Dr. Siran Li
Office: 444 Herman Brown
Email: Siran.Li@rice.edu
Time: MWF 11:00-11:50AM
Classroom: Herring Hall (HRG) 100
Office Hours: Tu/W 5-6pm, or by appointment
Class Webpage: https://siranlivictor.wixsite.com/maths

Text: OpenStax Calculus 1 (the first of a series of three books). We shall cover the entire book. You can download the book for free from ⟨https://openstax.org/details/books/calculus-volume-1⟩.

Course outline: Sets and functions. Limits. Continuity. Intermediate Value Theorem. Differentiation. Linearity of derivatives; the product/quotient rule. Finding derivatives of familiar functions. Chain rule. Inverse Function Theorem. Mean Value Theorem. First and second derivative tests. L'Hôpital's rule. Integration. Riemann sum. Change of variables in integration. Finding integrals of familiar functions. Geometric and physical applications of differentiation and integration.

Assignments: There are **two** components to the homework: WebAssign and problems sheets to be handed in every week.

1. WebAssign Homework will be due **every class day at 9:00PM** (starting on Friday, 25th August). It will be assigned through the WebAssign website. Each student needs to sign up for a WebAssign account and get familiar with WebAssign as soon as possible.

   The webAssign.net key for this course is: **rice 1198 4789**

2. Every week I will assign 5-7 problems for you to hand in by **10:50AM *Wednesday* to the homework folders "Dr. Li, MATH 101.003" outside the Maths Office, or directly to me at the beginning of the Wednesday lectures**. These problems will be of a nature that cannot be covered by online systems. They will be graded be the TA's and returned a week after the due date.

To learn calculus thoroughly, practical experience is essential. I encourage you to discuss the problems with each other, subject to the following rules: (1) make a serious attempt at each question by yourself first; (2) list the names of all your collaborators on each assignment; (3) do not exchange any written work with others; (4) write up every problem in your own words.

Each assignment must be submitted as a single document, not piecemeal. Also, only a physical copy will be accepted – no electronic submission. If you must be out of town, please ask your friend to print out and submit your assignment. Late assignments will not be accepted for ANY reason – instead, your three lowest webassign scores and the lowest paper-assignment will be dropped.

Exams: There will be two midterms on **Thursday, 28 September** and **Thursday, 2 November**, both at **7PM**.

Final: The date for the final exam is not available at this time. It is the policy of the Mathematics Department that no final may be given early to accomodate student travel plans. If you make travel plans that later turn out to conflict with the scheduled exam, then it is your responsibility to either reschedule your travel plans or take a zero in the final.

Books, notes, and calculators will **not** be allowed on exams. Make-up exams will be allowed only in the case of a documented medical emergency. If an exam conflicts with a holiday you observe, please let me know immediately.

Grading: Homework 20%: 10% WebAssign + 10% paper assignments. The remaining portion of your grade will be the **maximum** of the following four options:

- 25% Midterm I, 25% Midterm II, 30% Final.
- 20% Midterm I, 25% Midterm II, 35% Final.
- 25% Midterm I, 20% Midterm II, 35% Final.
- 20% Midterm I, 20% Midterm II, 40% Final.

Expectations: You are expected to attend every class and to arrive on time. It is your responsibility to keep informed of any announcements, syllabus adjustments, or policy changes made during classes. Not all announcements will be posted on the website.

Success: The most successful students tend to:

- Attend every class,
- Read the book and review their notes daily,
- Work on all the homework as it is assigned,
- Seek help as soon as they encounter trouble: fellow students, office hours, help room, etc.etc.

Disability support: Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center.

Teaching assistants, recitations and tutoring services: There will be recitations run by graduate students, and your written assignments will be marked by 5 or 6 TAs. More information about recitations and TAs will be updated soon. Also, private tutoring services may be available upon request through the Academic Advising Office.

Contacting me: By email at ⟨`Siran.Li@rice.edu`⟩, or preferably, come to my office hours on Tuesdays and Wednesdays from 5 to 6pm in 444 Herman Brown, or knock on my door at any time.